

Exhibit 3



≡ Sign in

WHAT CAN WE HELP YOU WITH?

Search



[ClearCorrect Support](#) > [Get started](#) > [Welcome to ClearCorrect](#)

Articles in this section



ClearCorrect® Aligners



Jamie L. Somers - Global T&E Director

[Follow](#)

3 months ago · Updated

Note: Not all features listed are available in all regions. Please contact your local ClearCorrect/Straumann representative to find out what is available in your area.

For information regarding ClearCorrect aligners, refer to the following:

- [Overview](#)

[Help](#)

- ClearQuartz™ Tri-layer Material
 - Features
 - How does it work?
 - What does the 3-layer structure do?
 - Multi-layer vs. Single-layer Material
- The ClearCorrect Performance Trimline
- ClearCorrect Aligner Customization Features
- The Patient Experience with ClearCorrect Aligners

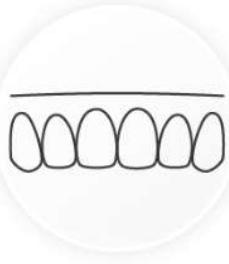
Overview

Premier Aligner

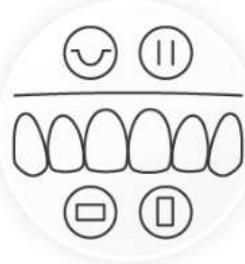
Engineered for precision, comfort and esthetics, ClearCorrect aligners are the ultimate orthodontic tool for your practice. Born from decades of material science, research and innovation, our aligners combine our proprietary ClearQuartz™ tri-layer material, Performance Trimline, and scientifically-proven ClearControl™ clinical features to help you achieve your orthodontic goals.



ClearQuartz tri-layer material



Performance Trimline



Scientifically-proven
ClearControl™
features



Stain resistant material

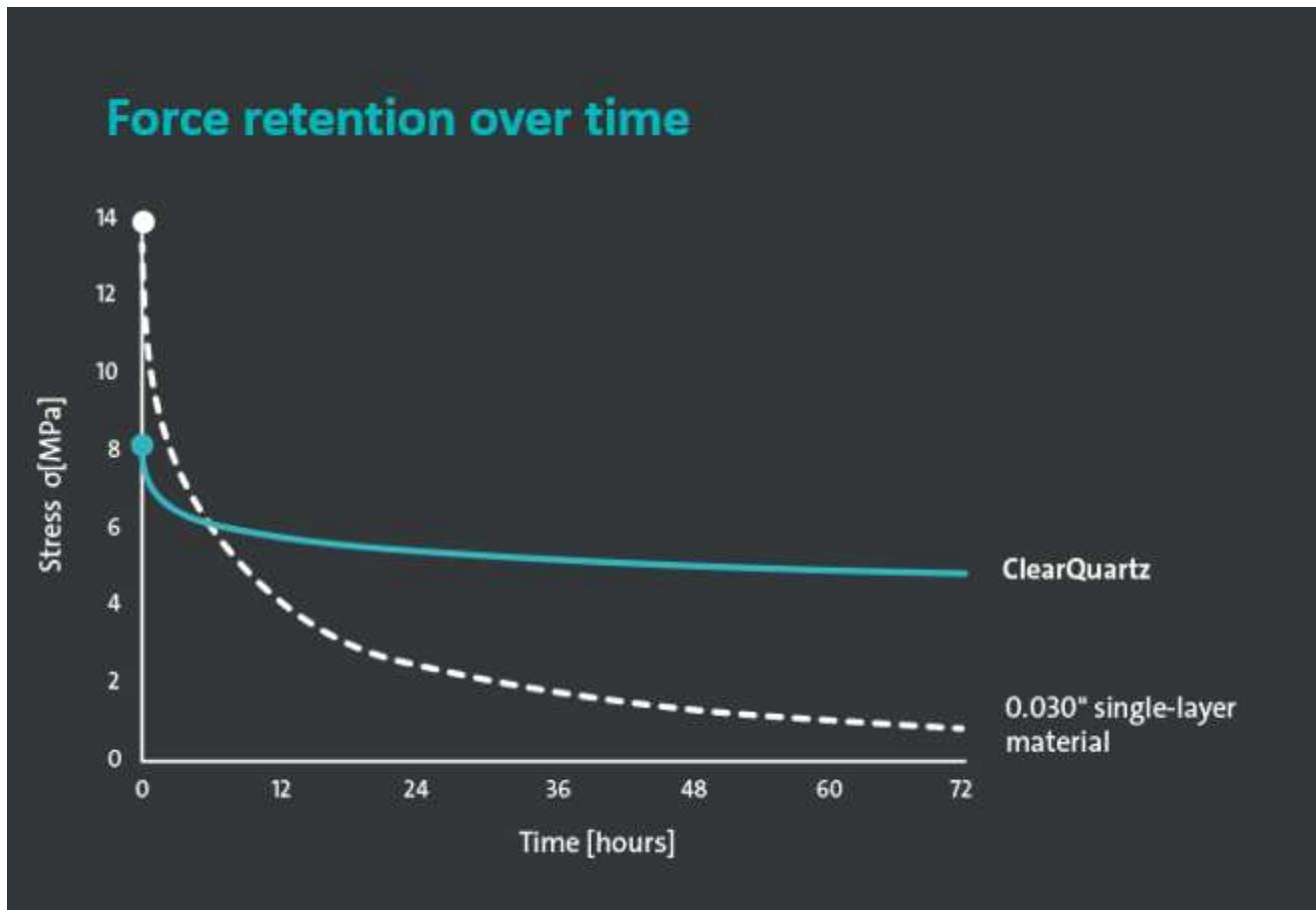
ClearQuartz Tri-layer Material

Our industry-leading tri-layer material provides greater orthodontic control by combining two layers of resilient polymers with an elastomeric inner layer, resulting in gentle, consistent application of force.



- Low-porosity material**
For durability and stain-resistance
- Elastomeric layer**
Applies gentle, consistent, and continuous force

ClearQuartz retains 10x more of its initial force than many competitors*, retains its shape throughout the wear time of the aligner**, and has proven durability, demonstrating 4x more tear resistance than single layer polymers***.



*Data on file. Over 72 hours.

**Data on file.

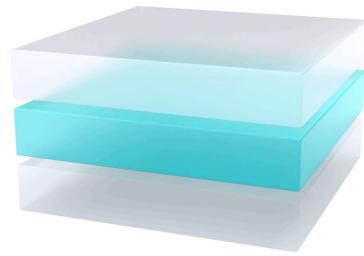
***Data on file vs 0.030 single-layer material.

Features

There are many valuable features associated with ClearQuartz, but here are some of the main features to be aware of:

The material has 3 layers:

- Outer shells that are durable and with low porosity
- An elastomeric inner layer



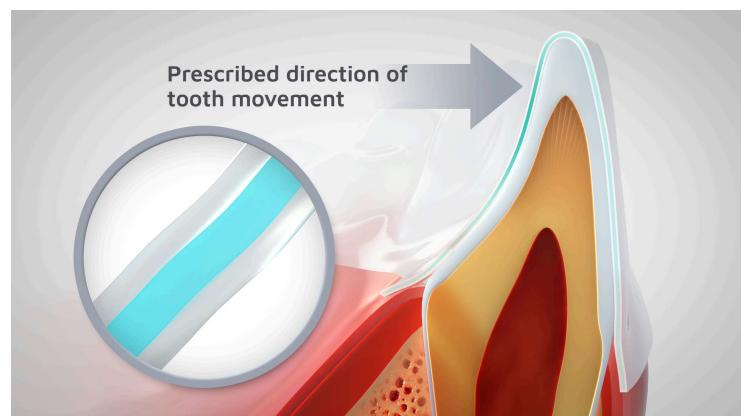
The outer layers provide:

- Durability to help reduce wear
- Minimized staining

The inner layer provides:

- Better elasticity and reduced stiffness
- More predictable force application due to the enhanced elasticity
- Consistent and continuous force application

ClearQuartz was designed to provide efficient and accurate movements due to the elasticity and adaptation while remaining comfortable for the patient.



How does the 3-layer structure work?

3-dimensional engineered properties: forces applied in any direction receive the rebound response.

The elastomeric layer improves
translation and rotation



What does the 3-layer structure do?

Some benefits of the 3-layer structure are:

- The elastomeric middle-layer enhances tooth-moving force and comfort because it's able to recover its form.
- The material is more durable because the elastomeric layer absorbs excess forces and reduces crack or tear propagation.
- This elasticity provides more comfort to the patient.

ClearQuartz™ tri-layer material vs.
Other single-layer material



Multi-layer vs. Single-layer Material

Combining the properties of both flexible and rigid resins in a multi-layered film allows for greater tear resistance, lower initial force, more consistent and longer sustained force, and a more precise fit compared to the properties of resins used in other aligners (e.g., polyurethane)*.

*Compared to ClearCorrect aligners previously made from single-layer .030 polyurethane material.

| Multi-layer Material | Single-layer Material |
|--|--|
| Combined layer material allows for the advantages of both soft and hard materials | Single layer materials are either soft (less thick) or hard (thicker). You can only get one benefit at a time. |
| Improved crack and tear resistance | Easier to crack |
| Elastomeric layer allow the aligners to keep their form as well as maintain continuous force | Form is lost faster as it wears out quickly |
| More recent innovation | Original clear aligner materials were single-layered |

[Back to top](#)

The Performance Trimline

ClearCorrect's Performance Trimline, scientifically proven ClearControl clinical features, and custom manufacturing technology and processes result in an aligner that delivers greater control and consistent force application to achieve complex movements more predictably.

ClearCorrect's trimline is a smooth, unscalloped, high and flat trimline that extends nominally $1.5\text{ mm} \pm 0.5\text{ mm}$ above the gingival margin. With the high and flat trimline, ClearCorrect aligners have been scientifically proven to optimize force transmission for more accurate tooth movement and enhanced root control*.

The effect of the trimline design of orthodontic aligners on force transmission was evaluated in a 2022 publication. The study concluded that the forces transmitted to the middle and cervical areas of the tooth with the high and flat trimline, were significantly higher and closer to the center of resistance, potentially improving control of bodily movement.

The scalloped trimline design was shown to be more flexible, reducing the amount of force applied to the tooth near the gingival area, required for a controlled tooth movement.

High and flat



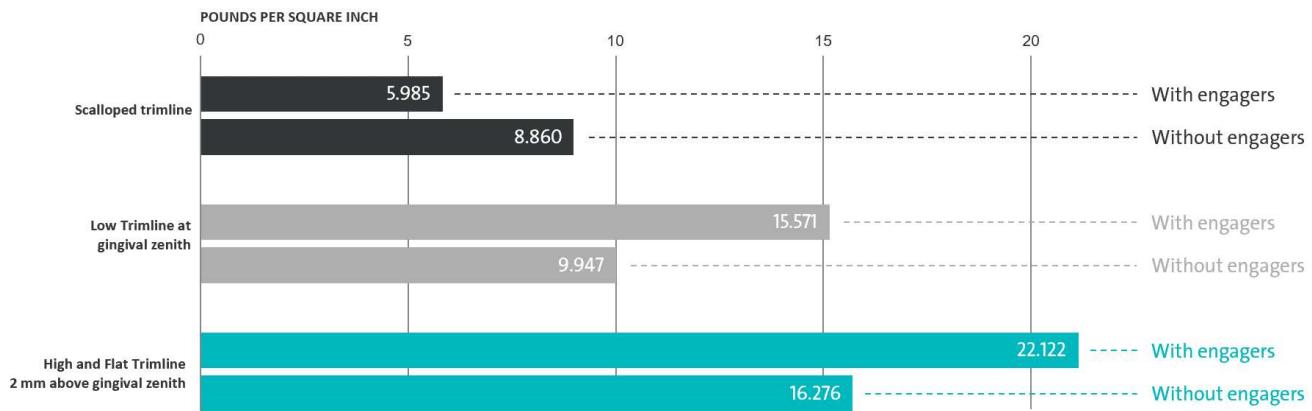
Scalloped



Representative superimposition to understand the stress distribution areas over the upper right central incisor, using different trimming line designs. Adapted from: Elshazly, T. et al. Effect of Trimming Line Design and Edge Extension of Orthodontic Aligners on Force Transmission: An in vitro Study. *Journal of Dentistry* (2022). doi: <https://doi.org/10.1016/j.jdent.2022.104276>

In addition, it has been proven that aligners with a trimline design that extends above the gingival margin, are up to 2.5x more retentive than scalloped aligners, which can reduce the need for retentive engagers**. In a 2012 study, doctors from the University of Nevada compared the retentive strength of three trimming techniques:

- A) a scalloped margin,
- B) a straight cut at the gingival zenith, and
- C) a straight cut at 2 mm above the gingival zenith.



The difference between the techniques was remarkable. For clear aligners without engagers, the straight cut 2 mm from the gingival margin was about twice as retentive as the scalloped cut. For clear aligners with engagers, the straight cut 2 mm from the margins was over four times as retentive as the scalloped cut.

In summary, fewer engagers mean better esthetics and less visibility, which means happier patients.

Lastly, ClearCorrect's custom manufacturing process improves tooth surface contact for optimized force distribution and accurate tooth movement***.

*Elshazly, T. et al. Effect of Trimming Line Design and Edge Extension of Orthodontic Aligners on Force Transmission: An in vitro Study. *Journal of Dentistry* (2022). doi: <https://doi.org/10.1016/j.jdent.2022.104276>

**The effect of gingival-margin design on the retention of thermoformed aligners" by Daniel P. Cowley, James Mah, and Brendan O'Toole in the *Journal of Clinical Orthodontics: JCO* 11/2012; 46(11):697-702.

***Data on File. 90% accuracy within 100 microns. 98% accuracy with 150 microns.

[Back to top](#)

Scientifically-proven ClearControl clinical features

Our ClearControl clinical features have been optimized to tailor your patient's treatment precisely to their needs: from customizable engagers, to bite ramps, to cutouts for elastics, to pontics, bars, and guides, clinicians can incorporate any number of treatment strategies to address cases ranging from simple to complex.

Cutouts for Elastics

Cutouts for elastics offer you more control to perform more complex movements. Confidently treat teens, Class II, and Class III malocclusions.



- Select a double vertical slit or half-moon button cutout
- Prescribe them in the Doctor Portal and approve them in ClearPilot
- Receive your aligners with pre-made cutouts for your patient to start wearing according to your treatment plan



Standard Engagers

Standard Engager sizes are available in 2, 3, and 4mm. Decide what size and orientation are best for your case.



Extended-beveled Engagers

To address more complex movements like rotations and extrusions, Extended-beveled Engagers are available in 2, 3 and 4 mm.



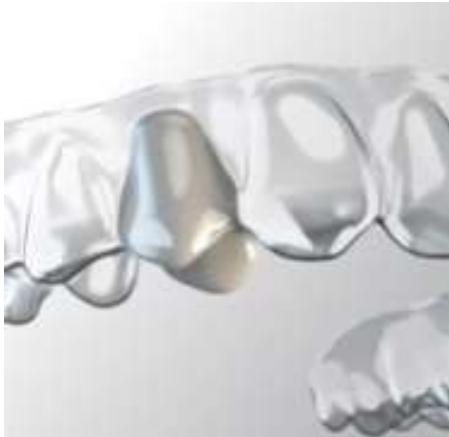
Anterior Bite Ramps

Anterior bite ramps are available in 3- and 5-mm depths and are manufactured ready-to-wear according to your patient's unique treatment plan. Confidently treat deep bites and crossbites.



Posterior Bite Ramps

Posterior bite ramps are available to place on the occlusal surface of posterior teeth. Placed in second molars at 1.5 mm and in first molars or first and second premolars at 2.0 mm over occlusal surface.



Pontics and Bars

Bars or tooth-shaped pontics are included in treatment when spacing is $>3\text{mm}$. This request may also be made at any step during the treatment. The features are resized as spacing opens or closes. Pontics provide an aesthetic solution for anterior spacing, while bars are frequently used for posterior spaces.

Guides

Guides act as space holders and aid erupting teeth. These guides may be requested as a tooth shape or a bubble shape. Resizing options are available. May be requested to start on any step during treatment.

Not all features shown are available in all markets.

[Back to top](#)

The Patient Experience with ClearCorrect Aligners



ClearQuartz's innovative flexible inner layer applies 1/3 less initial force, enhancing patient comfort during aligner treatment*



ClearCorrect aligners have been proven to be more stain-resistant than the leading aligner brand**



ClearCorrect's digital manufacturing technology enhances the trimline design for a custom and more comfortable fit

The stain-resistant properties of ClearCorrect were tested against the leading aligner brand. In a simulated test where aligners were immersed in 4 different staining agents, ClearCorrect demonstrated to be more stain resistant, as shown in the results below**.



*Data on file vs 0.030 single-layer material

**Data on file. Aligners immersed in the respective substances for 24 hours at 37°C.

[Back to top](#)

480.858_en_07



Was this article helpful?

Yes

No

85 out of 100 found this helpful

Have more questions? [Submit a request](#)

[Return to top](#)

Related articles

[ClearCorrect's Treatment & Pricing Options](#)

[ClearPilot™ - Treatment Setups](#)

[First Appointment - Collecting Records](#)

Aligner Material Information (not ClearQuartz™)

Intraoral scanning issues

Comments

0 comments

Article is closed for comments.

Follow us



Agents only



More

[About us](#)
[Doctors](#)
[Patients](#)
[Straumann Group](#)

Support

[Create a ticket](#)
[Contact support](#)

ClearCorrect Operating LLC

21 Cypress Blvd,
Suite 1010
Round Rock TX 78665
United States
(888) 331-3323
support@clearcorrect.com

Copyright © 2024 ClearCorrect Support. All Rights Reserved.